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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/501,570	02/10/2000	Anders Wikman	2380-164	4074

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EXAMINER

NGUYEN, SIMON

ART UNIT	PAPER NUMBER
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2683

DATE MAILED: 11/07/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/501,570

Applicant(s)

WIKMAN, ANDERS

Examiner

SIMON D NGUYEN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 12-14, 17 and 18 is/are rejected.
- 7) ☐ Claim(s) 10, 11, 15, 16, 19 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-3, 7, 13, 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Hall et al. (6,208,871).

Regarding claim 1, Hall discloses a radio communication system including base station 201 communicating over a radio interface with a mobile station (figs. 1-2), comprising: determining a timing adjustment (column 6 line 36, abstract); effecting a change on a timing of the mobile station according to a reference time of base station 101 (column 5 lines 58 to column 6 lines 24, column 9 lines 29-53) in a time interval as a first time interval (column 6 lines 21-24, column 9 line 45); effecting a change in a timing of the base station 201 (column 6 lines 45-59) in a new timing adjustment as a second

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time interval (column 6 lines 57-59). It is noted that the mobile station adjusts its timing according to the timing of the BTS 101 which is in a first time interval in order to time alignment with the BTS 101, then the mobile station receives a second timing offset from the base station 201, calculates a time difference between the BTS 101 and BTS 201 to generating a timing calculation, and send the timing calculation to the BTS 201 for adjusting which is a second time interval (column 9 lines 29 to column 10 lines 50) which means the time interval for adjusting the timing of the mobile station and the base station 201 is different.

Regarding claim 2, Hall discloses the step of determining a difference between the base station timing and a radio network controller timing and determining the timing adjustment based on the difference wherein the radio network controller timing is an absolute reference time (column 6 lines 30-37, column 10 lines 20-27).

Regarding claim 3, Hall discloses the step of comparing the difference with a desired time offset (threshold) in order to determine the timing adjustment (column 6 lines 34-36, 48-53).

Regarding claim 7, Hall discloses a handoff of the mobile station between a first and second base stations (fig.2), comprising: determining a timing adjustment for the first and second base stations (column 3 lines 28-40); effecting a change in timing of the first and second base stations (column 5 line 25 to column 6 line 59); effecting a change in timing of the mobile station during a time interval different from the timing of the first or the second base station timing is changed (column 5 lines 58-66, column 9 lines 45-53).

Regarding claim 13, Hall disclose a mobile station for communicating with a base station over a radio interface, wherein the base station being coupled to a base station controller (fig. 1), comprising: a mobile station timer (column 5 line 62); the mobile station detects a timing offset signal from the base station and a mobile station controller (column 6 line 1) adjusts the mobile station timer in response to the detected timing signal during a first time period for the mobile station to make a timing adjustment different from a second time period for the base station to make a timing adjustment (column 5 line 40 to column 6 line 60).

Regarding claim 17, Hall discloses that the timer is in the mobile station (column 5 line 62).

3. Claims 8, 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Wheatley et al. (6307,840).

Regarding claim 8, Wheatley discloses a base station coupled to a radio network controller for communicating with a mobile station over a radio interface (figs. 1, 7), comprising: timing source 98 as a base station timer; control processor 100 and timing adjustment processor 99 as data processing circuitry for receiving a timing adjustment from BSC and to adjust the base station timer 98 (column 9 lines 19-30, column 11 lines 47-56) during a first time period for the base station to make a timing adjustment different from a second time period allocated for the mobile station to make a timing adjustment (fig.2, column 5 lines 37 to column 6 lines 58, column 11 lines 30-42).

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Regarding claim 12, Wheatley discloses that the base station having internal timing source 98 (fig.7).

4. Claims 18 is rejected under 35 U.S.C. 102(e) as being anticipated by Norman et al. (6, 366,786).

Regarding claim 18, Norman discloses method for time synchronizing a base station and a mobile station wherein the mobile station and the base station each includes a timer and a counter (fig.4, column 2 lines 53-62) wherein the mobile station timer is adjusted at a different time than the base station timer (column 3 line 12 to column 4 line 21). It is noted that the network node is inherently in the Norman's communication system.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4-6, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hall et al. (6,208,871) in view of Upadrasta (5,872,820).

Regarding claim 4-6, Hall does not specifically disclose the step of adjusting the base station and the mobile station timing incrementally during the time intervals.

Upadrasta discloses the timing adjustment between a base station and a mobile station in which frame numbers of the base station and mobile frame number values are continuously incremented (fig.6, column 1 lines 65-67) and wherein the time intervals correspond to odd and even time intervals (figs. 3, 6, column 4 lines 20-44). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have Wheatley, modified by Upadrasta in order to prevent a drop off call between the base station and the mobile station.

Regarding claim 14, Hall failed to disclose a frame number counter.

Upadrasta discloses a timing adjustment in a communication system having a frame number counter in a mobile station and the processor in the mobile station for adjusting the frame number counter during a frame having a different number than a frame during which the mobile may make a timing adjustment (figs. 2-3, 6, columns 3-4). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have Wheatley, modified by Upadrasta in order to synchronize signals between the mobile station and the base station.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wheatley et al. (6,307,840) in view of Upadrasta (5,872,820).

Regarding claim 9, Wheatley discloses the base station timer. However, Wheatley fails to disclose a frame number counter.

Upadrasta discloses a timing adjustment in a communication system having a frame number counter in a base station and the processor in the base station adjust the

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frame number counter during a frame having a different number than a frame during which the mobile may make a timing adjustment (figs. 2-3, columns 3-4). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have Wheatley, modified by Upadrasta in order to synchronize signals between the mobile station and the base station.

Allowable Subject Matter

8. Claims 10-11, 15-16, 19-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 10-11, 15-16, 19-20, the prior art of record failed to disclose that if the base station adjusts the frame number counter during odd numbered frames the mobile station adjust during even numbered frames. If the base station adjusts the frame number counter during even numbered frames the mobile station adjust during odd numbered frames.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Simon Nguyen whose telephone number is (703) 308-1116. The examiner can normally be reached on Monday-Friday from 7:00 AM to 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost, can be reached on (703) 308-5318.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 306-0377.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 872-9314, (for formal communications intended for entry)

Hand-delivered response should be brought to Crystal Park II,
2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Simon Nguyen

November 2, 2002



WILLIAM TROST
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